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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,999	10/30/2003	Hidenobu Kamizono	Q77868	5659

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EXAMINER

DINH, DUC Q

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,999	KAMIZONO, HIDENOBU	
	Examiner	Art Unit	
	DUC Q. DINH	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is response to the Amendment filed on November 10, 2005. Claims 1-8 and 12-13 are pending in the application.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-8 and 12-13 are rejected on the ground of nonstatutory double patenting over claims 1-3 of U. S. Patent No. 6,679,054 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a keyboard device comprising "a second group of keys provided on a side opposite

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to said group of keys taking said sensor as a border” (claim 7 of the pending application) whereas the patent claimed “a second group of keys provided on the left side of said first group of keys with said left sensor as a border”. (claim 1 of patent 6,697,054)

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 33 U.S.C. § 103

4. The following is a quotation of 35 U. S. C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox et al. (US patent No. 5,909,21), hereinafter, Knox.

In reference to claim 1, Knox (figure 3) teaches a keyboard device (80) for key inputting by selecting any one of two functions (Knox teaches that the two functions are, typing function and positional function) (col. 11, lines 21-31), effected by certain keys (90) on a keyboard (80), wherein hands of a user present at the keyboard are detected by sensor (74), and one of the two

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functions affected by the certain keys is selected based on the result of the detection by the sensor (Knox teaches in the alternative embodiment that the switching from the cursor positional function to the typing function is carried out by detecting multiple fingers, and the switching from the typing function to the cursor positional function is carried out when a single finger is detected) (col. 11, lines 31-41).

Knox does not expressly teach that the sensor detects the hands of a user at the home position. However, home position is the position, which the user has his hand on the keyboard when he starts typing. As indicated above, Knox teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize that, when the multiple fingers are detected by the sensor in Knox's device, the user would have his fingers in the home position because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard.

As to claim 12, the claim is a broader version of claim 1 and is analyzed as previously discussed with respect to claim 1.

7. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox as applied to claims 1 and 12 above, and further in view of Hiller (U.S. Patent NO. 6,396,483).

In reference to claims 2 and 13, as discussed above, Knox teaches all the limitations of claim 2 except the citation that the certain keys are ten-key section provided with numeric input function and cursor shift function.

However, Hiller (figures 1 & 3-4) teaches a keyboard (100) wherein only a ten-key section (105) can be switched between a numeric keypad function and a cursor positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Knox's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between the two functions (numeric input and cursor positioning) so as motivated by Hiller, because the numeric keypad is seldom used, an opportunity is therefore presented to make more effective use of this area (by using the same keys in both numerical input mode and cursor positioning mode) without sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39). Furthermore, by allowing only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

8. Claims 3 and 5 are rejected under U.S. C. 103 (a) as being unpatentable over Sellers (US patent No. 5,864,334) in view of Knox.

In reference to claim 3, Sellers (figure 1) teaches a keyboard device (10) for key inputting by selecting any one of two functions (typing function and cursor position function) (col. 5, lines 57-59) affected by certain keys (29) on a keyboard (28). Seller teaches a sensor (camera 52) for

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detecting the hand of the user above the keyboard (step 98 of figure 8) (col. 8, lines 25-28), a function switching (58) to select one of the two functions by pressing a key (col. 6, lines 30-41), a sensor validating/invalidating switch to changeover the validation/invalidation of the detection result of the sensor (steps 98 and 106 of figure 8 which validate the hand configuration in the observation zone) (col. 8, lines 25-28 and 37-45). Sellers also teaches a control section for selecting one of the two functions according to the detection result of the sensor when the sensor validating/invalidating switch is validated (figure 8, YES or NO in step 98, and then YES in step 106 for generating a pick signal to have the device act as cursor positioning; or YES or NO in step 98, then NO in step 106, then NO in step 112 and then YES in step 114 to have the device switch back to the typing mode using hand movement without using the switch 58), and by the function switching key (58) when the validating/invalidating switch is invalidated (figure 8, NO in steps 98 and 106 and then YES in step 112 for switching from the cursor positioning mode to typing mode and YES in step 94 to switch back to cursor mode using only the switch 58 without detecting the hand) (col. 8, lines 12-54).

Sellers does not teach that the sensor detects whether hands of a user are present at home position. Note that, in step 114 of figure 8, Sellers teaches that to change from cursor mode to typing mode without using the switch (58), the sensor has to detect the re-entry of the hand and pressing any. Such teaching may suggest having the user in typing position when detected. But the mode changes is instigated when the hand re-entry is detected and any key is depressed, and not upon sensing the hand only.

However, home position is the position, which the user has his hand on the keyboard when he starts typing. Knox teaches that when multiple fingers are detected by the sensor, the

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mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position), and the mode changing is instigated when the hand is detected.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Knox's teaching of having the switching to one of the two functions carried out by detecting the user's, hand in home position, to be incorporated to Sellers's device because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard. Furthermore, switching to typing mode upon sensing the user's hand will accelerate the switching and therefore, accelerate the entry of data.

In reference to claim 5, Sellers (figure 1) teaches a keyboard device (10) for key inputting by selecting any one of two functions (typing function and cursor position function) (col. 5, lines 57-59) affected by certain keys (29) on a keyboard (28). Seller teaches a function switching key (58) to select one of the two functions by pressing a key (col. 6, lines 30-41), a sensor (camera 52) which is activated (ON state) when the hand is detected above the keyboard (YES in step 98 or YES in step 106 of figure 8) and inactive (OFF state) when the hands are not detected (NO in steps 98 and 106 of figure 8). Sellers also teaches a control section for monitoring respective events of press-down of the function switching key (steps 94 and 112 of figure 8) and the transition from ON state to OFF state (NO in steps 98 and 106 of figure 8) of the sensor and from the OFF state to the ON state of the sensor and selecting alternatively one of the two functions, each time when one of the events occurs (after re-entering the hand and press

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key, the device switches to the typing mode (YES in step 114), and if the switch depressed, the device switches to typing mode (YES in step 112)) (col. 8, lines 12-54).

Sellers does not teach that the sensor detects whether hands of a user are present at home position. Note that, in step 114 of figure 8, Sellers teaches that to change from cursor mode to typing mode without using the switch (58), the sensor has to detect the re-entry of the hand and pressing any. Such teaching may suggest having the user in typing position when detected. But the mode changes is instigated when the hand re-entry is detected and any key impressed, and not upon sensing the hand only.

However, home position is the position which the user has his hand on the keyboard when he starts typing. Knox teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Knox's teaching of having the switching to one of the two functions carried out by detecting the user's hand in home position, to be incorporated to Sellers's device because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard. Furthermore, switching to typing mode upon sensing the user's hand will accelerate the switching and therefore, accelerate the entry of data.

9. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiller in view of Knox.

In reference to claim 7, Hiller (figure 1) teaches a keyboard device (100) that includes a first group of keys (101) provided on a keyboard, a second group of keys (numeric keypad area 105 which functions as numerical key entry as shown in figure 3) on the opposite side of the first group of keys (col. 2, lines 40-45 and col. 3, lines 12-18). Hiller shows a control section (205) for disabling the input of the second group of keys (Hiller figure 4 teaches disabling the keypad area 105 to be activated in a mouse mode) (col. 2, lines 51-54 and col. 3, lines 19-22).

Hiller does not teach a sensor taking as a border for detecting whether hands of a user are present at the home position of the first group of keys, and wherein the control section is disabling the input by the second group of keys while the sensor detects hands.

However, Knox (figure 3) teaches a keyboard device (80) for key inputting by selecting any one of two functions (Knox teaches that the two function are the typing function or positional function) (col. 11, lines 21-31), affected by certain keys (90) on a keyboard (80), wherein hands of a user are present at the keyboard in typing position is detected by a sensor (74) wherein the sensor is located in the border of the keyboard (80), and one of the two functions affected by the certain keys is selected based on the result of the detection by the sensor (Knox teaches in the alternative embodiment that the switching from the positional function to the typing function is carried out by detecting multiple fingers, and the switching from the typing function to the positional function is carried out when a single finger is detected) (col. 11, lines 31-41).

Note that, the home position is the position, which the user has his hand on the keyboard when he starts typing. As indicated above, Knox teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple

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fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Hiller's device to include Knox's teaching of having a sensor on the border of the keyboard, that detects the user's hand in home position and to disable the input of the keypad (switching between two functions) in accordance to the detection of the hand to be incorporated to Hiller's device so that, the user may intuitively switch between the two functions (I.e., activate or deactivate the digitizer 10) which make the device user friendly. It would also increase the speed of the operations on the device by not requiring the depressing of a control key to switch between modes. Having the sensor on the boarder of the keyboard is obvious to a person of ordinary skill in the art because having the sensor in the border would allow to detect the position of the user's hands on the entire keyboard.

Note that, Hiller and Knox are combinable to contemplate the limitations of claim 7 because both reference are direct to a keyboard used for typing and for cursor positioning. The digitizer (flat input device 105) of Hiller is only located in the ten-key section of the keyboard (i.e., second group of keys).

Therefore, to combine the teaching of Knox to Hiller, the sensor of Knox would be applied to the digitizer portion of Hiller, simply because switching between two modes in Knox's device is carried out on the digitizer (10).

As to claim 8, as disclosed above, Hiller (figure 3) teaches that the second group of keys (105) includes a group of numeric input keys (col. 3, lines 12-14).

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10. Claims 4 and 6 are rejected under 35 U. S. C. 103 (a) as being unpatentable over Sellers and Knox as applied to claims 3 and 5 above, and further in view of Hiller.

In reference to claims 4 and 6, as discussed above, Sellers and Knox teach all the limitations of claims 4 and 6 except the citation that the certain keys are ten-key section provided with numeric input function and cursor shift function.

However, Hiller (figures 1 & 3-4) teaches a keyboard (100) that includes a ten-key section (105), which has a numeric keypad function and a cursor positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Sellers's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between two functions (numeric input and cursor positioning) so as motivated by Hiller, because the numeric keypad is seldom used, an opportunity is therefore presented to make more effective use of this area (by using the same area in both numerical input mode and cursor positioning mode) without sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39). Furthermore, by allowing only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

Response to Arguments

11. Applicant's arguments filed on November 10, 2005 have been fully considered but they are not persuasive. With respect to claims 1 and 12, Applicant argues "Knox does not teach that

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these functions are affected by certain keys on keyboard. The examiner respectfully disagrees, as discussed above, two functions, i.e.: cursor positional function and typing function, effected by certain keys of the keyboard, when the device in cursor position operational mode the, certain keys of the keyboard cannot be used for typing function, and when the typing function activated by the sensor, the positional function of the keyboard cannot be used. Based on the detection of the sensor the device selects a function, i.e.: typing function mode, for certain keys on the keyboard. With respect to claim 2 and 13, as discussed above, Knox does not teach the certain key are ten-key section provide the numeric input function and cursor shift function. However, Hiller teaches a method for switching the ten-key area between numeric and cursor positioning modes. Therefore, it would have been obvious to modify Knox's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between the two functions (numeric input and cursor positioning) so as motivated by Hiller because it would allow only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry. With respect to claims 3 and 5 refer to the response to claims 1 and 12 for the two functions are effected by certain keys as discussed above.

With respect to claims 7 and 8, Hiller discloses the control section 205 for disabling the input of the second group of keys when the ten-key section in the mouse mode as discussed above and Knox discloses disabling the input of the group of keys of the keyboard by the sensor. Because both reference are direct to a keyboard used for typing and for cursor positioning. The digitizer (flat input device 105) of Hiller is only located in the ten-key section of the keyboard

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(i.e., second group of keys). Therefore, it would have been obvious to modify Hiller's device to include Knox's teaching of having a sensor on the border of the keyboard, that detects the user's hand in home position and to disable the input of the keypad (switching between two functions) in accordance to the detection of the hand to be incorporated to Hiller's device so that, the user may intuitively switch between the two functions (I.e., activate or deactivate the digitizer 10) which make the device user friendly. The rejection is maintained.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH
Examiner
Art Unit 2674

DQD
March 17, 2006



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SUPERVISORY PATENT EXAMINER
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